

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended) A peptide comprising an amino acid sequence of GLP-1(7-35) or of GLP-1(7-35) having deletion, substitution and/or addition of one or a few amino acids and having a GLP-1 activity with Waa-(Xaa)_n-Yaa (in which Waa is Arg or Lys, Xaa is the same with Waa, n is an integer of 0 to 14, and Yaa is Arg or Arg-NH₂) on its C-terminus of the peptide.
2. (original) A peptide according to claim 1, wherein the amino acid sequence of GLP-1 is substituted at position 8 with Ser.
3. (original) A peptide according to claim 1, wherein the amino acid sequence of GLP-1 is substituted at position 26 with Gln and at position 34 with Asn.
4. (original) A peptide according to claim 1, wherein n is an integer of 1 to 9.
5. (original) A peptide according to claim 1, wherein n is an integer of 3 to 5.
6. (previously presented) A peptide according to claim 1, wherein the amino acid sequence of GLP-1 is substituted at position 8 with Ser, at position 26 with Gln and at position 34 with Asn.

7. (previously presented) A peptide according to claim 1, which has a higher efficiency of transmucosal absorption than that of naturally occurring GLP-1.

8. (currently amended) A pharmaceutical composition for transmucosal administration containing as an active ingredient a peptide comprising an amino acid sequence of GLP-1(7-35) or of GLP-1(7-35) having deletion, substitution and/or addition of one or a few amino acids and having a GLP-1 activity with Waa-(Xaa)_n-Yaa (in which Waa is Arg or Lys, Xaa is Arg or Lys, n is an integer of 0 to 14, and Yaa is Arg, Arg-NH₂, Lys, or Lys-NH₂) on its C-terminus of the peptide.

9. (original) A pharmaceutical composition according to claim 8, which contains a fat emulsion regulated to be negatively charged thereon.

10. (previously presented) A pharmaceutical composition according to claim 8, which is used for nasal administration.

11. (previously presented) A pharmaceutical composition according to claim 8, which is used in treatment of non-insulin dependent chronic diabetes mellitus, treatment of insulin dependent chronic diabetes mellitus, treatment of obesity and/or suppression of appetite.

12. (previously presented) A peptide according to claim 1, comprising an amino acid sequence of GLP-1(7-35), including the one in which position 8 is substituted with Ser, the one in which position 26 is substituted with Gln, and the one in which position 34 is substituted with Asn, having Waa-(Xaa)_n-Yaa (in which Waa is Arg or Lys, Xaa is the same

with Waa, n is an integer of 0 to 14, and Yaa is Arg or Arg-NH₂) added to the C-terminus of the peptide.

13. (currently amended) A pharmaceutical composition according to claim 8, wherein the peptide contained as an active ingredient comprises an amino acid sequence of GLP-1(7-35) or of GLP-1(7-35) having deletion, substitution and/or addition of one or a few amino acids and having a GLP-1 activity with Waa-(Xaa)_n-Yaa (in which Waa is Arg or Lys, Xaa is the same with Waa, n is an integer of 0 to 14, and Yaa is Arg or Arg-NH₂) on its C-terminus of the peptide.

14. (previously presented) A pharmaceutical composition according to claim 8, wherein the peptide contained as an active ingredient comprises an amino acid sequence of GLP-1(7-35), including the one in which position 8 is substituted with Ser, the one in which position 26 is substituted with Gln, and the one in which position 34 is substituted with Asn, having Waa-(Xaa)_n-Yaa (in which Waa is Arg or Lys, Xaa is the same with Waa, n is an integer of 0 to 14, and Yaa is Arg or Arg-NH₂) added to the C-terminus of the peptide.

15. (previously presented) A pharmaceutical composition according to claim 8, wherein the peptide contained as an active ingredient comprises an amino acid sequence of [Ser⁸]-GLP-1(7-35) with Waa-(Xaa)_n-Yaa (in which Waa is Arg or Lys, Xaa is the same with Waa, n is an integer of 0 to 14, and Yaa is Arg or Arg-NH₂) on its C-terminus of the peptide.

16. (currently amended) A method for treating non-insulin dependent diabetes mellitus, insulin dependent diabetes mellitus and/or obesity which comprises transmucosally administering to the patient the pharmaceutical composition containing as an active ingredient

a peptide comprising an amino acid sequence of GLP-1(7-35) or of GLP-1(7-35) having deletion, substitution and/or addition of one or a few amino acids and having a GLP-1 activity with Waa-(Xaa)_n-Yaa (in which Waa is Arg or Lys, Xaa is Arg or Lys, n is an integer of 0 to 14, and Yaa is Arg, Arg-NH₂, Lys, or Lys-NH₂) on its C-terminus of the peptide.

17. (previously presented) A method according to claim 16, wherein the pharmaceutical composition contains as an active ingredient a peptide comprising an amino acid sequence of [Ser⁸]-GLP-1(7-35) with Waa-(Xaa)_n-Yaa (in which Waa is Arg or Lys, Xaa is the same with Waa, n is an integer of 0 to 14, and Yaa is Arg or Arg-NH₂) on its C-terminus of the peptide.